

LARIONOV, V.P., dotsent, kand.tekhn.nauk

Power characteristics of high-voltage insulation for pulsating potentials. Izv. vys. ucheb. zav.; energ. 3 no.8:16-26 Ag '60.
(MIRA 13:9)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy tekhniki vysokikh napryazheniy.
(Electric insulators and insulation)

IARIONOV, V.P., kand.tekhn.nauk

Leader stage of a spark discharge. Elektrichestvo no.8:72-
76 Ag '61. (MIRA 14:10)

1. Moskovskiy energeticheskiy institut.
(Electric spark)
(Electric discharges)

BORISOGLEBSKIY, Petr Vasil'yevich; DMOKHOVSKAYA, Lidiya Fedorovna;
LARIONOV, Vladimir Petrovich; PANTAL', Yuriy Stanislavovich;
RAZEVIG, Daniil Vsevolodovich, prof.; RYABKOVA, Yelena
Yakovlevna; DOLGINOV, A.I., retsenzent; FERTIK, S.M.,
retsenzent; NIKOLAYEVA, M.I., red.; BORUNOV, N.I., tekhn. red.

[High-voltage engineering] Tekhnika vysokikh napriazhenii.
[By] P.V.Borisoglebskii i dr. Moskva, Gosenergoizdat, 1963.
471 p. (MIRA 17:3)

VASIL'YEV, Aleksandr Aleksandrovich; LARIONOV, V.P.; OKOLOVICH, M.N.;
Prinimali uchastiye NAYASHKOVA, Ye.F.; KRYUCHKOV, I.P.; BORUNOV,
N.I., tekhn. red.

[Electrical section of power plants and substations]Elektriches-
skaya chast' stantsii i podstantsii. Moskva, Gosenergoizdat,
Pt.1. [Electrical equipment and power distribution devices]
Elektricheskie apparaty i raspredelitel'nye ustroistva. 1963.
495 p. (MIRA 16:3)

(Electric power plants)
(Electric substations)
(Electric power distribution)

YURIKOV, Pavel Andreyevich; LARIONOV, V.P., red.; LARIONOV, G.Ye.,
tekhn. red.

[Overvoltages and electrical strength of high-voltage
insulation] Perenapriazheniia i elektricheskaiia prochnost'
vysokovol'tnoi izoliatsii. Moskva, Izd-vo "Energia,"
1964. 69 p. (Biblioteka elektromontera, no.118)
(MIRA 17:4)

LARIONOV, V. P., dotsent; ZEYTUN, Asaad, inzh.

Voltage-time characteristics of air gaps at large impulses with
long duration. Izv vys ucheb zav; energ 7 no. 1:13-19 Ja '64.
(MIRA 17:5)

1. Moskovskiy ordena Lenina energeticheskiy institut.

YURIKOV, Pavel Andreyevich; LARIONOV, V.P., red.

[Protection of insulation from atmospheric overvoltages;
valve dischargers] Sredstva zashchity izoliatsii ot at-
mosfernykh perenapriazhenii; ventil'nye razriadniki. Mo-
skva, Energiia, 1964. 70 p. (Biblioteka elektromontera,
no.147) (MIRA 18:1)

L 46033-66 EWT(1)

ACC NR: AR6013636

SOURCE CODE: UR/0058/65/000/010/G034/G034

AUTHOR: Larionov, V. P. 48B

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 54-58

TITLE: Study of electrical strength in long air gaps

SOURCE: Ref. zh. Fizika, Abs. 10G235

TOPIC TAGS: voltage stabilization, electric discharge

TRANSLATION: 100 cm long air gaps of the rod-plate and sphere-plate type were studied. Negative pulses (up to 0.6 Mv) were supplied to the plate from a pulse generator. The rod or sphere were grounded by a shunt for the measurement of pre-discharge currents. The rise time varied between 2 and 80 μ sec for a pulse duration of 2000 μ sec. On the basis of the currents measured, the pre-discharge processes were analyzed. It is suggested that the period preceding the discharge be separated into a number of characteristic stages. Breakdown voltage as a function of pre-discharge time, as well as a function of the various components of the pre-discharge period is graphed. The causes underlying the drop in discharge voltage with increases in rise time are investigated.

SUB CODE: 09/

SUBM DATE: none

all
Card 1/1

ZAPUSKALOV, V.I.; KASPAROVA, S.A.; KONOROVA, Ye.V.; KOPSHITSER,
I.Z.; LARIONOV, V.P.; SVIDLO, V.M.; POL'TS, K.K.; ZOTOV,
V.A., red.

[Exercise therapy in the psychiatric hospital] Iechebnaia
fizicheskaiia kul'tura v psikhiatricheskoj bol'nitse. Mo-
skva, Meditsina, 1965. 235 p. (MIRA 18:8)

KHOLIN, A.I.; KANTOR, S.A.; LARIONOV, V.V.

Some features of processing and interpreting data on radiation well logging related to statistical characteristics of previously investigated processes. Trudy MNI no.15:227-236 '55. (MLRA 9:8)
(Oil well logging, Radiation)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1,
p 157 (USSR) 15-57-1-994

AUTHORS: Kholin, A. I., Kantor, S. A., Larionov, V. V.,
Barsukov, O. A.

TITLE: The Influence of the Size of Probe on the Results of
Measurements by the Neutron Gamma Method (K voprosu
o vliyani razmera indikatora na rezul'taty izmereniy
neytronnym gamma-metodom)

PERIODICAL: Tr. Mosk. neft. in-ta, 1955, Nr 15, pp 236-246.

ABSTRACT: In association with the ultimate size of a probe for
gamma radiation during radiometric investigation of
drill holes, the intensity of secondary gamma radiation
 I_{rec} is distinguished from the theoretical I_0 rec;
calculated on the assumption that the indicator is
accurate, in the following relation:

$$I_{rec} = I_0 \text{ rec } \frac{2}{\mu a} \text{ sh}(\mu a/2),$$

Card 1/2

15-57-1-994

The Influence of the Size of Probe on the Results (Cont.)

where μ is a coefficient depending on the hydrogen content of the medium, a is the length of the probe, and sh is the hyperbolic sine. To determine quantitatively the porosity by intensity of secondary gamma radiation, it is expedient to use a probe of minimum length or to introduce a correction to the value of the recorded intensity for the length of the probe. Curves are supplied to show the relationship between the correction factor and the value of μa produced. The ultimate length of the probe leads to a distorted actual length of the sonde ($l_{act.}$) by the neutron gamma method, calculated from the computation of l between the source and the middle of the indicator. To obtain an approximate calculation of the actual length of the sonde, the following formula is recommended: $l_{act.} = pq/q - p \log q/p$, where p and q are the distances from the source of neutrons to the first and second ends of the indicator (counter).

N. A. P.

KHOLIN, A.I.; IARIONOV, V.V.

Effect of silting tendency of formations on neutron-gamma-ray
log readings. Trudy MNI no.15:246-251 '55. (MLRA 9:8)
(Porosity) (Oil well logging, Radiation)

DAKHNOV, V.N.; LARIONOV, V.V.; IVANOV, Yu.M.

Using radioisotopes for studying reservoir properties of rocks.
Trudy MNI no.15:260-265 '55. (MLBA 9:8)
(Radioisotopes--Industrial applications)
(Oil well logging, Radiation)

LARIONOV, V.V.

Effect of absorption properties of collectors on the determination
of their porosity by the neutron gamma-ray log. Geol. nefti 1 no.9;
52-61 S '57. (MIRA 10:9)

1. Moskovskiy neftyanoy institut imeni Gubkina.
(Oil well logging, Radiation)

LARIONOV, V. V.

PHASE I BOOK EXPLOITATION 749

1. Barsukev, Oleg Aleksandrovich; Blinova, Nina Mikhaylevna; Vybornykh, Sergey Fedorovich; Gulin, Yuriy Aleksandrovich; Dakhnov, Vladimir Nikolayevich; Larionov, Vyacheslav Vasil'yevich; Kholin, Arkadiy Ivanovich

Radioaktivnyye metody issledovaniya neftyanykh i gazovykh skvazhin
(Radioactive Methods for Exploring Oil and Gas Wells) Moscow,
Gostoptekhnizdat, 1958. 314 p. 5,000 copies printed.

Reviewers: Tarkhov, A.G., Doctor of Physical and Mathematical Sciences,
Professor, Department of Ore Geophysics of the Sverdlovsk Mining
Institute imeni V.V. Vakhrusheva; Executive Ed.: Shorokhova, L.I.;
Tech. Ed.: Polosina, A.S.

PURPOSE: The book was authorized as a textbook by the Ministry of
Higher Education for students of geological and geophysical sections
at petroleum vuzes. It is also intended as a handbook for geologists
and geophysicists dealing with the theory and techniques of modern
radioactive methods of oil well exploration.

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Radioactive Methods for Exploring (Cont.)

749

COVERAGE: The authors stress the physical principles of radiometry of oil and gas wells, describe the operation of radiometric instruments and measuring procedures, and interpret the obtained data. In 1953, the authors working at the Laboratoriya Radioaktivnykh Metodov Issledovaniya Skvazhin (Laboratory of Radioactive Oil Well Logging) of the Moscow Petroleum Institute were the first to solve one of the most important problems, i.e., the use of radioactive methods to determine the location of oilfield water in cased wells. The authors developed the radioactive isotope method and the special modifications of neutron methods for well surveying which have been used extensively by industry since 1954 in the exploration of petroleum resources. A method using sodium activation to establish the location of oilfield water was developed in 1954 at the Petroleum Institute of the USSR Academy of Sciences. N.M. Blinov wrote chapter I; V.N. Dakhnov, the introduction and chapters II, V, and VII; A.I. Kholin, chapter III; O.M. Arutinov, O.A. Barsukov, Ya. Ya. Gorskiy, and V.V. Larionov, chapter IV; V.V. Larionov and A.I. Kholin, chapter VI; Yu.A. Gul'in and I.I. Fel'dman, chapter VII; O.A. Barsukov and K.A. Barsukov, chapter VIII; O.A. Barsukov, chapter IX; O.A. Barsukov and A.I. Kholin, chapter X; and S.F. Vybornykh, chapter XI. There are 66 references scattered through the book, 37 of which are Soviet, and the rest English. The book contains 21 tables and 146 drawings.

Card 2/10

LARIONOV, V. V.: Master Geolog-Mineralo Sci (diss) -- "Analysis of the simultaneous effect of absorption and diffusion of neutrons in rock on the indications of neutron methods of investigating oil and gas mines, and the development of measures to increase the geological effectiveness of these methods". Moscow, 1958. 16 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Inst of the Oil-Chem and Gas Industry im I. M. Gubkin, Chair of Industrial Geophysics), 160 copies (KL, No 6, 1959, 128)

DAKHNOV, Vladimir Nikolayevich; DOLINA, Lyubov' Petrovna. Prinsipal
uchastnye Larionov, V.V.. BEKMAN, Yu.K., vedushchiy red.;
FEDOTOVA, I.G., tekhn.red.

[Geophysical methods for studying oil and gas reservoir rocks]
Geofizicheskie metody izucheniia neftegazonosnykh kollektorov.
Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry,
1959. 267 p. (MIRA 13:2)
(Petroleum geology) (Gas, Natural--Geology)
(Prospecting--Geophysical methods)

LARIONOV, V.V.

Studying the porosity and oil content of reservoir rocks by
radiometric methods. Trudy MINKHIGP no.24:107-121 '59.
(Oil well logging, Radiation) (MIRA 13:3)

LARIONOV, V.V., inzh.

Diesel manufacture in the German Democratic Republic.
Sudostroenie 25 no.3:64-70 Mr '59. (MIRA 12:5)
(Germany, East--Marine diesel engines)

DVORKIN, I.L.; LARIONOV, V.V.

Effect of cement salinization on estimates of water and petroleum bearing capacity of reservoir strata obtained by neutron logging. Razved.i prom.geofiz. no.32:36-38 '59.
(MIRA 13:4)

(Oil well logging, Radiation)

DAKHNOV, V.N.; KOBRANOVA, V.N.; PECHERNIKOV, V.F.; BENDEL'SHTEYN; B.Yu.;
KHOLIN, A.I.; POZIN, L.Z.; D'YAKONOV, D.I.; LATYSHEVA, M.G.;
DOBRYNIN, V.M.; LARIONOV, V.V.; NEYMAN, Ye.A.; LEBEDEV, A.P.

Terminology and symbols used in applied geophysics. Prikl. geofiz.
no.27:223-235 '60. (MIRA 13:12)
(Prospecting--Geophysical methods)

LARIONOV, Y.V.

Estimating reservoir porosity and clayiness by the data of well radio-
metry. Trudy VHII no.29:218-228 '60. (MIRA 13:10)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im. akad.Gubkina.

(Oil well logging, Radiation)

LARIONOV, V.V.

Using data of borehole radiometry in estimating reservoir properties of strata when searching for sites suitable for underground storage of gas in the Kaluga region. Trudy MINKHIGP no.31:3-15 '60.
(MIRA 13:11)

(Kaluga region--Radioactive prospecting)

LARIONOV, V.V.

PHASE I BOOK EXPLOITATION SOV/5592

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniye v narodnom khozyaystve SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy Vsesoyuznogo soveshchaniya 12 - 16 aprelya 1960 g. g. Riga, v 4 tomakh. t. 4: Poiski, razvedka i razrabotka poleznykh iskopayemykh (Radioactive Isotopes and Nuclear Radiation in the National Economy of the USSR; Transactions on the Symposium Held in Riga, April 12 - 16, 1960, in 4 volumes. v. 4: Prospecting, Surveying, and Mining of Mineral Deposits) Moscow, Gostoptekhizdat, 1961. 284 p. 3,640 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR. Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii

Eds. (Title page): N. A. Petrov, L. I. Petrenko, and P. S. Savitskiy; ed. of this volume: M. A. Speranskiy; Scientific ed.: M. A. Speranskiy; Executive Eds.: N. N. Kuz'mina and A. G. Ionel';

Card 1/11

Radioactive Isotopes and Nuclear (Cont.)

102
SOV/5592

Tech. Ed.: A. S. Polosina.

PURPOSE : The book is intended for engineers and technicians dealing with the problems involved in the application of radioactive isotopes and nuclear radiation.

COVERAGE: This collection of 39 articles is Vol. 4 of the Transactions of the All-Union Conference of the Introduction of Radioactive Isotopes and Nuclear Reactions in the National Economy of the USSR. The Conference was called by the Gosudarstvennyy nauchno-tekhnicheskiy komitet Sovet Ministrov SSSR (State Scientific-Technical Committee of the Council of Ministers of the USSR), Academy of Sciences USSR, Gosplan SSSR (State Planning Committee of the Council of Ministers of the USSR), Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers of the USSR for Automation and Machine Building), and the Council of Ministers of the Latvian SSR. The reports summarized in this publication deal with the advantages, prospects, and

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Radioactive Isotopes and Nuclear (Cont.)

SOV/5592

development of radioactive methods used in prospecting, surveying, and mining of ores. Individual reports present the results of the latest scientific research on the development and improvement of the theory, methodology, and technology of radiometric investigations. Application of radioactive methods in the field of engineering geology, hydrology, and the control of ore enrichment processes is analyzed. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Alekseyev, F. A. Present State and Future Prospects of Applying the Methods of Nuclear Geophysics in Prospecting, Surveying, and Mining of Minerals	5
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Guberman, Sh. A., V. V. Larionov, and A. I. Kholin. Possibil- ities of Evaluating the Porosity of Rocks on the Basis of Data Obtained by Radiometry of Boreholes		86
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Card 5/11		

LARIONOV, V.V.; ELANSKIY, M.M.

Using field geophysical data in studying geological structures for underground gas storage. Gaz.prom. 6 no.7:44-49 '61. (MIRA 17:2)

DAKHNOV, V.N., doktor geol.-miner. nauk; KHOLIN, A.I., kand. geol.-
miner.nauk; PESTRIKOV, A.S.; GALUZO, Yu.V.; AFRIKYAN, AN.;
YUDKEVICH, R.V.; POPOV, V.K.; POZIN, L.Z.; LARIONOV, V.V.;
VENDEL'SHTEYN, B.Yu.; GORBUNOVA, V.I.; DZYURAK, M.D.; YEVDOKIMOVA,
V.A.; ZHOKHOVA, R.G.; LATYSHEVA, M.G.; MAREN'KO, N.N.; MANCHEVA,
N.V.; MOROZOVICH, Ya.R.; OREKHOVSKAYA, Ye.P.; POKLONOV, M.S.;
ROMANOVA, T.F.; SEVOST'YANOV, M.M.; TANASEVICH, N.I.; FARMANOVA,
N.V.; FEDOROVICH, G.P.; SHCHERBININ, V.A.; ELLANSKIY, M.M.;
YANUSH, Ye.F.; YUNGANS, S.M., ved. red.; YAKOVLEVA, Z.I., tekhn.
red.

[Using methods of field geophysics in studying gas-bearing re-
servoirs]Primenenie metodov promyslovoi geofiziki pri izuchenii ga-
zonosnykh kollektorov. Moskva, Gostoptekhizdat, 1962. 279 p.

(MIRA 16:2)

(Gas, Natural--Geology)

(Prospecting--Geophysical methods)

LARIONOV, Vyacheslav Vasil'yevich; DAKHNOV, V.N., doktor geol.-
miner. nauk, prof., red.; BEKMAN, Yu.K., ved. red.;
VORONOVA, V.V., tekhn. red.

[Nuclear geology and geophysics] IAdernaia geologiya i geo-
fizika. Moskva, Gostoptekhnizdat, 1963. 351 p.

(MIRA 16:12)

(Nuclear geophysics)

LARIONOV, V.V.

Study of the radioactivity of karstic limestones of the Karabi-Yayly Mountain under natural conditions. Trudy MINKHIGP no.41:
13-20 '63. (MIRA 16:10)

VENDEL'SHTEYN, Boris Yur'yevich; LARIONOV, Vyacheslav Vasil'yevich;
DAKHNOV, V.N., prof.; ZARETSKAYA, A.I., ved. red.

[Using the data of field geophysics in estimating gas and
oil reserves] Ispol'zovanie dannykh promyslovoi geofiziki
pri podschete zapasov nefi i gaza; metodicheskoe rukovod-
stvo. Moskva, Izd-vo "Nedra," 1964. 197 p.

(MIRA 17:6)

BOGDYL', P.T.; LARIONOV, V.V.; PRIGOROVSKIY, N.I.

Method for studying elastoplastic deformations of materials under
repeatedly varying loads. Zav. lab. 31 no.9:1116-1119 '65.

(MIRA 18:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya.

L 13063-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(b) JD

ACC NR: AP6000185

SOURCE CODE: UR/0032/65/031/012/1494/1497

AUTHOR: Gusenkov, A. P.; Larionov, V. V.; Shneyderovich, R. M. 21

ORG: State Scientific Research Institute for Machine Design (Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya) B

TITLE: Comparison of short-time fatigue curves [obtained] in testing under soft and hard loading [conditions] 16

SOURCE: Zavodskaya laboratoriya, v. 31, no. 12, 1965, 1494-1497

TOPIC TAGS: fatigue test, fatigue curve, fatigue curve equation

ABSTRACT: Fatigue testing performed with a small number of cycles is conducted mainly under soft or hard loading conditions (that is, with constant stress or strain amplitudes, respectively) and a fatigue curve for the applied type of loading conditions is obtained. The procedure in constructing a fatigue curve for hard loading from a known fatigue curve for soft loading, and vice versa, is discussed. Equations of the fatigue curves are written for both testing techniques, taking into account the variation in stress-strain relations during the process of cyclic deformation. The conditions and results of testing an aluminum alloy, austenitic steel, and heat-resistant steel (the first two materials are strainhardened, the third is softened by cyclic deformation) are presented and discussed. The fatigue curves for both types of loading conditions obtained by analytical calculations, by the proposed method, and by testing are compared with each other in diagrams and are examined. Orig. art. has: 5 figures and 2 formulas. [VK]

Cord 1/2

UDC: 620.178.3

2
L 13063-66

ACC NR: AP6000185

SUB CODE: 11, 20 / SUBM DATE: none / ORIG REF: 004. OTH REF: 002 / ATD PRESS: 418,

Card

2/2

HW

L 57697-65 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/
EWP(1)/EWA(c) Pf-4/Ps-4 IJP(c) MJW/JD/IN/EM UR/0380/65/000/002/0079/0032
ACCESSION NR: AP5014378 620.17/192.7

AUTHOR: Larionov, V. Y. (Moscow)

TITLE: Investigation of the stress redistribution during failure in low cycle fatigue

SOURCE: Mashinovedeniye, no. 2, 1965, 79-82

TOPIC TAGS: low cycle fatigue, fatigue failure, metal fatigue/ UME 10T testing machine, 1Kh18N9T/steel, 96 aluminum alloy

ABSTRACT: Specimens of work-hardening materials (austenitic steel 1Kh18N9T and Al alloy V-96) were tested in apparatus UME-10T under symmetrical repeated loads at 2-3 cpm. The specimens consisted of flat strips (5 mm thick) with a 5-mm diameter hole or two types of notches ($\rho = 1.5$ mm and $\rho = 0.35$ mm) as stress concentrators. ($Q_s = 3$ and 6 respectively for $\rho = 1.5$ and 0.35). Sensitive surface films were used to measure strains up to 1.5% on the specimen surface. A 40x magnifying microscope was used to detect crack initiation and growth. It was found that for the specimens with holes, redistribution of strain occurs over a large portion of the cross section, while notched specimens exhibited little ($\rho = 1.5$) or no ($\rho = 0.35$) redistribution. Calculated stresses were based on the observed deformations

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L 57607-65

ACCESSION NR: AP5014378

using the general diagrams for cyclic deformations of A. P. Gusankov and R. M. Shneyderovich (Osobennosti tsiklicheskogo uprugoplasticheskogo deformirovaniya pri povyshennykh temperaturakh. Mashinovedeniye, 1965, No. 1). The cyclic deformation after 1, 3, 10, 50, and 100 half-cycles for alloy V-96 is shown in Fig. 1 on the Enclosure. Comparison of data obtained in these experiments and other experiments with soft and hard (constant deformation amplitude) loading indicates that the failure stresses (causing cracks) are the same during soft and hard loading. This was confirmed by the fact that for V-96 all experimental points fell within the region of scatter of the fatigue curve obtained with soft loading at 5 stress levels with 10 specimens at each level. No data are presented on results with 1Kh18N9T. Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 11Jan65

ENCL: 01

SUB CODE: MM/AS

NO REF SOV: 004

OTHER: 000

Card 2/3

L 57607-65

ACCESSION NR: AP5014378

ENCLOSURE: 01

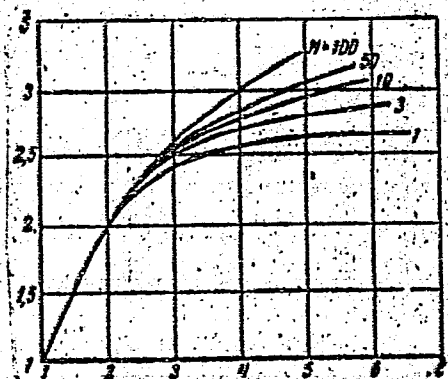


Fig. 1. Cyclic deformation of alloy V-96

Card

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L 55972-55 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
 Pf-4/Ps-4 IJP(c) MJW/JD/HW/EM

ACCESSION NR: AF5014495

UR/0032/65/031/006/0720/0725
 620.171

AUTHORS: Gusenkov, A. P.; Larionov, V. V.; Shneyderovich, R. M.

42
 39
 B

TITLE: Peculiarities of tension-compression failure after a small number of cycles

SOURCE: Zavodskaya laboratoriya, v. 31, no. 6, 1965, 720-725

TOPIC TAGS: low cycle fatigue, fatigue, fatigue failure / V 96 aluminum alloy, 1Kh18N9T steel, 45 steel

ABSTRACT: To continue the low cycle failure investigations described by T. A. Beksh and R. M. Shneyderovich (Zavodskaya laboratoriya, XXX, 12, 1964), specimens of aluminum alloy V-96 (work hardening), steel 1Kh18N9T (work hardening and then constant load-deformation loop), steel 45 (constant loop width), and heat resistant steel (cyclic weakening) were experimentally fatigued in tension-compression at a rate of ~ 10 cpm. The specimens (test section 22 mm long and 8 mm in diameter) were loaded with symmetrical and asymmetrical loads ($r = \frac{\sigma_{\min}}{\sigma_{\max}}$ between 1 and 0.3), and the load deformation, plastic deformation and area

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L 55972-65

ACCESSION NR: AP5014495

2

reduction were recorded. The stress-cycle and elongation and area reduction-cycle curves were obtained to determine the relative importance of "quasi-static" failure (marked by plastic deformation) and fatigue failure (marked by growth of fatigue cracks). The plastic deformation ϵ_p

$$\epsilon_{\text{tot}}^{(k)} = \epsilon^{(0)} - \sigma^{(0)} + \sum_{k=1}^k \delta^{(k)} \cdot (-1)^k$$

(where $\delta(k)$ = plastic deformation during a half-cycle, 0 = initial loading) accumulated after k half-cycles was also evaluated and plotted as a function of cycles. It was found that for 1Kh18N9T (austenitic) quasi-static failure was primarily determined by the stress maxima, while fatigue failure was determined by stress amplitude. The curves for this steel represented the most general case exhibiting regions of quasi-static and fatigue failure as well as a large region of intermediate failure modes. For steel 45 the failures were quasi-static, independent of the initial stress and stress asymmetry, and occurred at a deformation close to the deformation of a single cycle failure. Alloy V-96 failed in fatigue at ϵ of 2-3%, while static failure was accompanied by an area reduction of 15%. Typically, the alloy had a life of less than 100 cycles (quasi-static) and would not exhibit fatigue failure below 100 cycles. Figure 1 on the Enclosure shows a comparison between the fatigue properties of steel 45, 1Kh18N9T,

Card 2/4

L 55972-65

ACCESSION NR: AP5014495

and heat resistant steel. Orig. art. has: 7 figures and 1 formula.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya
(State Scientific Research Institute of Machine Design)

SUBMITTED: 00

ENCL: 01

SUB CODE: MM,45

NO REF SOV: 008

OTHER: 001

Card 3/4

L-55972-65

ACCESSION NR: AP5014495

ENCLOSURE: 01

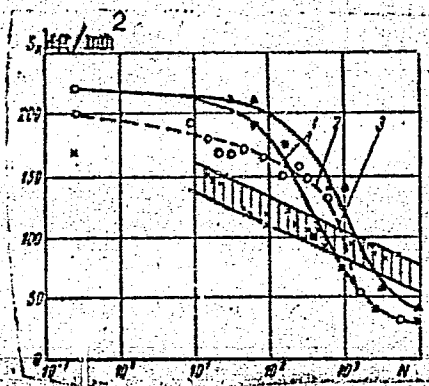


Fig. 1.

Fatigue stress versus number of cycles:

- 1- 1Kh18N9T ($m - R = 0.9$, $A - r = 0.5$);
- 2- heat resistant steel (0);
- 3- steel 45 (x)

ac
Card 4/4

L 1317-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/ENP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) LZW/

ACCESSION NR: AP5022173 JD/HV/EM

UR/0032/65/031/009/1116/1119

620.178.32

AUTHOR: Bogdyl', P. T.; Larionov, V. V.; Prigorovskiy, N. I.

TITLE: Method of studying elastic-plastic strains under repeated variable loads

SOURCE: Zavodskaya laboratoriya, v. 31, no. 9, 1965, 1116-1119

TOPIC TAGS: stress distribution, plastic deformation, elastic deformation

ABSTRACT: The article describes the application of the method of optically sensitive coatings to the study of elastic-plastic strains under repeated variable loads for local strains of up to 2% and numbers of cycles of the order of 1×10^3 . Methods of gluing the optically sensitive layer to the surface of the test piece were studied and various glues were tested in order to produce the required adhesion. A V96 alloy and an optically sensitive layer consisting of ED5M (epoxy resin ED5 with additives) were chosen for the study. It is found that in the range of the highest strains (1.7%), the values of the optical sensitivity of the layer to stresses and strains remain practically constant when the cycles are repeated and the load level is changed. The redistribution of strains and stresses in the zone of an aperture in the center of a plate of V96 alloy was studied under

Card 1/2

L 1317-66

ACCESSION NR: AP5022173

cyclic stretching and compression as a function of the number of cycles and load level. Failure occurred when the actual stresses reached the endurance curve of the alloy. Orig. art. has: 3 figures, 1 table, and 1 formula.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya
(State Scientific Research Institute of Mechanical Engineering)

SUBMITTED: 00

ENCL: 00

SUB CODE: AS

NO REF SOV: 005

OTHER: 000

Card *mlr*
2/2

LARIONOV, V.V., inzh.

Diesel-electric dredgers. Sudostroenie no.7:79 J1 '60.
(MIRA 13:7)

(Dredging machinery)

LARIONOV, V.V., inzh.

Crane vessel of 75-ton capacity. Sudostroenie 26 no. 11:16-17
N '60. (MIRA 14:1)
(Floating cranes)

SOKOLOVSKIY, V.D., Marshal Sovetskogo Soyuza; BELAYEV, A.I., polkovnik;
GASTILOVICH, A.I., doktor voyennykh nauk, prof. general-polkovnik;
DENISENKO, V.K., polkovnik; ZAV'YALOV, I.G., general-mayor;
KOLECHITSKIY, V.V., general-mayor; LARICHOV, V.V., kand. voyennykh
nauk, polkovnik; MYRKOV, G.M., polkovnik; PAROT'KIN, I.V., kand.
voyennykh nauk, polkovnik; PROKHOROV, A.A., general-mayor; POPOV, A.S.,
polkovnik; SAL'NIKOV, K.I., polkovnik; SHIMANSKIY, A.N., polkovnik;
CHEREDNICHENKO, M.I., general-mayor; SHCHEGOLEV, A.I., polkovnik;
MOROZOV, B.N., polkovnik, red.; KONOVALOVA, Ye.K., tekhn. red.

[Military strategy] Voennaya strategiya. Moskva, Voenizdat, 1962.
457 p. (MIRA 15:7)

(Strategy)

SOKOLOVSKIY, V.D., Marshal Sovetskogo Soyuz; BELIAYEV, A.I., polkovnik;
GASTILOVICH, A.I., doktor voyennykh nauk, prof. general-
polkovnik; DENISENKO, V.K., polkovnik; ZAV'YALOV, I.G.,
general-mayor; KOLECHITSKIY, V.V., general-mayor; LARIONOV,
V.V., kand. voyennykh nauk polkovnik; NYRKOV, G.M., polkov-
nik; PAROT'KIN, I.V., kand. voyennykh nauk polkovnik;
PROKHOROV, A.A., general-mayor; POPOV, A.S., polkovnik;
SAL'NIKOV, K.I., polkovnik; SHIMANSKIY, A.N., polkovnik;
CHEREDNICHENKO, M.I., general-mayor; SHCHEGOLEV, A.I., pol-
kovnik; MOROZOV, B.N., polkovnik, red.; KONOVALOVA, Ye.K.,
tekhn. red.

[Military strategy] Voennaya strategiya; Izd.2., ispr. i dop.
Moskva, Voenizdat, 1963. 503 p. (MIRA 16:10)
(Strategy)

IVANOV, O.S., doktor khim.nauk; TSEYTLIN, V.Z., kand.tekhn.nauk;
GOMOZOV, L.I., kand.tekhn.nauk; LARIONOV, V.V., inzh.

Hardness of niobium-molybdenum alloys at temperatures up to
1600°. Metalloved. i term. obr. met. no.7:4-7 JI '62. (MIRA 15:6)

1. Institut metallurgii im. A.A. Baykova i Moskovskiy
vecherniy mashinostroitel'nyy institut.
(Niobium-molybdenum alloys--Testing)
(Metals at high temperatures)

LARIONOV V.R.

USSR/Biology - Zoology

Card 1/1 Pub. 22 - 45/47

Authors : Larionov, V. R., and Semashko, L. L.

Title : Squamose merganser in the USSR

Periodical : Dok. AN SSSR 101/6, 1141 - 1143, Apr. 21, 1955

Abstract : The characteristics of squamose hooded merganser birds (diving water fowl of the goose family) found in various points of Asiatic USSR are described. Three references: 1 English and 2 USSR (1864-1954). Illustrations.

Institution : The M. V. Lomonosov State University, Moscow

Presented by : Academician Ye. N. Pavlovskiy, January 24, 1955

VYSOTSKIY, Konstantin Petrevich; LARIONOV, Vladimir Sergeyevich; SAMOYLOV, Pavel Pavlevich, inzhener [deceased]; STOYLIK, M.A., redaktor; LARIONOV, G.Ye., tekhnicheskij redaktor.

[Transportation of peat] Transport torfa. Moskva, Gos.energ.izd-vo, 1955. 256 p. (MIRA 9:4)

(Peat--Transportation)

LARIONOV, Yarsoslav Ivanovich [deceased], dots.

Photoluminescence spectra of solutions of salts of rare earths.
Vest. LGU 2 no.7:18-28 JI '47. (MIRA 12:9)
(Rare earth compounds--Spectra)

LARIONTSEV, Ye.G. (Moskva)

Some problems of the hydrodynamic and hydromagnetic stability
of a cylindrical jet. Prikl. mat. i mekh. 28 no.5:962-964
S-O '64. (MIRA 17:11)

LARIONOV, Ye.I. (pos.Nizhniy Ufaley Chelyabinskoy oblasti)

Individual assignments on physics for the evening secondary school students. Fiz.v shkole 22 no.1:82-84 Ja-F '62. (MIRA 15:3)
(Physics—Study and teaching)

ABRAMOV, M.A.; ALIVERDIZADE, K.S.; AMIROV, Ye.M.; ARENSON, R.I.; ARSEN'YEV, S.I.; BAGDASAROV, R.M.; BAGDASAROV, G.A.; BADAMYANTS, A.A.; DANIYE-
 L'YAN, G.N.; DZHAFAROV, A.A.; KAZAK, A.S.; KERCHENSKIY, M.M.; KONYU-
 KHOV, S.I.; KRASNOBAYEV, A.V.; KURKOVSKIY, A.I.; LALAZAROV, G.S.;
 LARIONOV, Ye.P.; LISTENGARTEN, M.Ye.; LIVSHITS, B.L.; LISIKYAN, K.A.;
 LOGINOVSKIY, V.I.; LYSENKOVSKIY, P.S.; MOLCHANOV, G.V.; MAY-
 DEL'MAN, N.M.; OKHON'KO, S.K.; ROMANIKHIN, V.A.; ROSIN, I.I.; RU-
 STAMOV, E.M.; SARKISOV, R.T.; SKRYPNIK, P.I.; SOBOLEV, N.A.; TARA-
 TUTA, R.N.; TVOROGOVA, L.M.; TER-GRIGORYAN, A.I.; USACHEV, V.I.;
 PAYN, B.P.; CHICHEROV, L.G.; SHAPIRO, Z.L.; SHEVCHUK, Yu.I.; TSODIK, A.A.;
 ABUGOV, P.N., red.; MARTYNOVA, M.P., vedushchiy red.; DANIYE-
 L'YAN, A.A.; TROFIMOV, A.V., tekhn.red.

[Oil field equipment; in six volumes] Neftianoe oborudovanie; v
 shesti tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-
 toplivnoi lit-ry. Vol.3. [Petroleum production equipment] Obo-
 rudovanie i instrument dlia dobychi nefti. 1960. 183 p.

(MIRA 13:4)

(Oil fields--Equipment and supplies)

ca

4

Conductometric method of controlling the acidity in the production of electrolytic manganese dioxide. It. Kh. [illegible] and Yu. A. Larjounov., Zashchitaya Lab. #, 925-31(1939). An investigation of the elec. cond. of solns. obtained in the electrolytic production of MnO₂ showed that an increase in the concn. of the H₂SO₄ in the soln. is proportional to the ratio of the resistance of the starting soln. to the resistance of the soln. which is being tested. This relationship is not affected by temp. variations. The ratio of resistances was measured by vacuum tube circuit. The results indicate that the arrangement can be used for detg. the increase in the H₂SO₄ concn. in the soln. provided the temp. during the measurements is const. and the starting soln. is used as a standard of comparison. The cell must be cleaned often to remove the MnO₂ ppt.

B. Z. Kamich

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCEDURES AND PROPERTIES INDEX																			
<p>CA</p> <p>An apparatus for potentiometric and conductometric measurements with continuous visual registration. R. Kh. Hel'gren and Yu. A. Laktionov, <i>Zhurnal Khim. Fiz.</i>, No. 1, 110-21 (1940). App. is described that permits (1) det. of abs. values of electrochem. potentials and of redox potentials of solns., (2) making const. changes in variable potentials and resistances, (3) potentiometric and conductometric titrations with visual registration on the galvanometer. The app. is made almost entirely of standard radio parts and can be assembled easily. W. R. Heun</p>																			
ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION										EDITION NUMBER									
EDITION NUMBER										EDITION NUMBER									

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>cd</p> <p>Controlling the acidity of waste and wash waters with a lamp voltmeter. R. Kh. Hel'gren and Yu. A. Laryunov. <i>Zavodskaya Lab.</i> 9, No. 2, 191-3(1940); <i>Khim. Referat. Zhur.</i> 1940, No. 7, 50.—The change in the acidity of waste water in the production of tower H_2SO_4 can be detd. from the change in the elec. cond. by means of a lamp bridge with a CC-118 lamp. A tech. 45-mv. millivoltmeter is used as galvanometer. The electrode cell is made up in the form of an Fe or plastic tube to which 2 Cu electrodes are connected. The cell is placed in a current of cold water. The millivoltmeter is standardized with H_2SO_4 solns. A similar scheme was used in the production process of $Al_2(SO_4)_3$ for detg. the concn. of salts in wash water. In this case the electrode cell consisted of a glass tube with sealed-in Pt electrodes. Satisfactory results were obtained under production conditions. W. R. Henn</p>																										<p>7</p>																									
<p>ASM-AIA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>SECTION 02</p>																										<p>SECTION 01</p>																									
<p>SECTION 03</p>																										<p>SECTION 04</p>																									

PRECEDENCE AND PRIORITY INDEX																									
1ST AND 2ND CATEGORIES													3RD AND 4TH CATEGORIES												
<div style="display: flex; justify-content: space-between;"> Colorimetric determination of aluminum hydroxyquinolate. M. M. Rafines and Yu. A. Larionov. Zarodskaya Lab. 14, 1000(1948).—Tests with 7 org. solvents for dissolving the oxine ppts. show that CCl₄ is better than AmOH but in some cases CCl₄ seems to be best. 7 </div> <div style="text-align: right;">G. M. Kosolapoff</div>																									
<div style="display: flex; justify-content: space-between;"> ASA-3LA METALLURGICAL LITERATURE CLASSIFICATION E.2 </div>																									

CA

7

Potentiometric titration of technical mixtures of acetic acid and acetic anhydride produced from acetone. M. M. Balnes and Yu. A. Iakimov (State Inst. Applied Chem., Moscow). *Zhurnal Khim. Fiz.* 15, 638-41 (1940).—The $\text{AcOH} + \text{Ac}_2\text{O}$ is detd. by titration with aq. NaOH . The PhNHAc formed is not hydrolyzed by aq. NaOH . Complete binding of the Ac_2O requires twice the stoichiometric amt. of PhNH_2 . The titration can be carried out in the presence of Me_2CO and of tarry substances which exclude the use of color indicators. A nomogram is given for detg. the AcOH and Ac_2O contents from the titrations. N. Thon

LARIONOV, YU. A.

USSR/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1215

Author: Raynes, M. M., and Larionov, Yu. A.

Institution: Academy of Sciences USSR

Title: Utilization of Qualitative Reactions in the Colorimetric Determination of Copper and Nickel

Original

Periodical: Tr. komis. po analit. khimii AN SSSR, 1956, Vol 7, No 10, 295-299

Abstract: The microchemical method for the detection of Cu based on the latter's catalytic effect on the oxidation of hydroquinone by H_2O_2 in the presence of pyridine was used in the photolorimetric determination of Cu. The experiments were carried out with a type LIOT photolorimeter with a photoelectric cell. The thickness of the test sample is 10 cm and the capacity of the cuvette is 4 ml. The extinction was calculated from the photocurrent measurements. To 10 ml of a solution of $CuSO_4$ containing 0.2-5 mg/l Cu, one milliliter of 0.1% hydroquinone, H_2O_2 and 5% pyridine each are added. After 10 minutes one

Card 1/2

ACCESSION NR: AP4034567

8/0079/64/034/004/1111/1113

AUTHOR: Popeleva, G. S.; Andrianov, K. A.; Larionova, A. A.; Golubtsov, S. A.

TITLE: Thermal condensation of dimethylchlorosilane with certain organic chloro-derivatives.

SOURCE: Zhurnal obshchey khimii, v. 34, no. 4, 1964, 1111-1113

TOPIC TAGS: dimethylchlorosilane, thermal condensation, dimethylvinylchlorosilane, dimethylallylchlorosilane, β chlorovinyl dimethylchlorosilane, bis dimethylchlorosilyl ethylene, p chlorophenyldimethylchlorosilane, disproportionation, monofunctional derivative, polyfunctional derivative, distillation, purification, etherification

ABSTRACT: This is a continuation of earlier investigations of the thermal condensation of chlorosilanes with different chloro-organic compounds. In this investigation the thermal condensation (at 500-550 C) of chloroorganics with dimethylchlorosilane were studied:



Card 1/2

ACCESSION NR: AP4034567

Dimethylvinylchlorosilane, dimethylallylchlorosilane, and compounds not described in the literature, beta-chlorovinyl dimethylchlorosilane, bis(dimethylchlorosilyl)ethylene, and p-chlorophenyldimethylchlorosilane were prepared by this method. In the high temperature condensation process disproportionation of the dimethylchlorosilane takes place with the formation of dimethyldichloro-, methyl-dichloro- and trichlorosilanes, which in turn condense with the chloroorganics to form di- and tri-functional compounds whose boiling points are near those of the desired monofunctional compounds. These cannot be separated even by repeated distillation. It was found the monofunctional compounds may be purified by partial etherification of the polyfunctional impurities with isobutyl alcohol. Orig. art. has: 1 table.

ASSOCIATION: None

SUBMITTED: 19Jan63

DATE ACQ: 11May64

ENCL: 00

SUB CODE: GC

NO REF SOV: 006

OTHER: 005

Card 2/2

LARIONOVA, A.N.

Altitudes - Measurement

Hypsometric map of the U.S.S.R. with a scale of 1:2 500 000. Izv. Vses. geog. obshch., 84, No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

LARIONOVA, Antonina Nikolayevna; SNEZHINSKIY, V.A., otv.red.; MIRONENKO,
Z.I., red.; VOLKOV, N.V., tekhn.red.; BRAYNINA, M.I., tekhn.red.

[Traveling over the ocean bottom] Puteshestvie po morskomu dnu.
Leningrad, Gidrometeor.izd-vo, 1959. 101 p. (MIRA 13:2)
(Ocean bottom)

ALEYNER, Aron Zalmanovich; LARIONOVA, Antonina Nikolayevna;
CHURKIN, Vladimir Gerasimovich; PERVAKOV, I.L., red.;
CHERUYKH, M.P., mladshiy red.; MAL'CHEVSKIY, G.N., red.
kart; KOSHELEVA, S.M., tekhn. red.

[Gerardus Mercator] Gerard Merkator. Moskva, Gos. izd-vo
geogr. lit-ry, 1962. 79 p. (MIRA 15:7)
(Mercator, Gerardus, 1512-1594)

3(5)

SOV/12-91-2-13/21

AUTHORS: Larionova, A.N., Churkin, V.A.

TITLE: Vladimir Aleksandrovich Brilliant. His 75th Birthday and the 25th Anniversary of His Election as a Member of VGO

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1959, Nr 2, pp 184 - 185 (USSR)

ABSTRACT: The authors give a short biography of V.A. Brilliant, who was educated at St. Petersburg Politechnical Institute and Moscow University, and has since served at the GPB(State Library). He organized the catalogue system of that library, and its map section. Brilliant is a great authority on cartography, bibliography and related subjects.

Card 1/1

SOV/28-58-6-27/34

AUTHORS: Katsenelenbogen, M.B., Larionova, D.S., Engineers

TITLE: Ball Bearing Steel (Sharikopodshipnikovaya stal')

PERIODICAL: Standartizatsiya, 1958, Nr 6, pp 82-84 (USSR)

ABSTRACT: For ball bearings, a highly carbonized chromium steel with homogeneous structure, mechanical properties, and very low content of inclusions is used. Non-metallic inclusions reduce the aging resistance (Figure 1 and 2). The Committee of Standards, Measures and Measuring Devices has issued the new State Standard GOST 801-47. The new standard is effective on 1 April 1959. For the steel types ShKh15 and ShKh15SG, the limits for the permitted carbon content have been reduced to 0.10% instead of 0.15%. For large profiles (100 mm and higher) the macrostructure must be tested not only in cross templets, but also in longitudinal templets (Figure 4). Most

Card 1/2

Ball Bearing Steel -

SOV/28-58-6-27/34

important is the control of the steel for non-metallic inclusions. The larger the area of the inclusions, the lower the quality of the steel. There are 3 graphs and 1 photo.

ASSOCIATION: Komitet standartov, mer i izmeritel'nykh priborov
(Committee of Standards, Measures and Measuring
Devices)

Card 2/2

LARIONOVA, D.S.

TABLE I BOOK EXCERPTS

509/548

Abdumalyk msk SSSR. Emulsiya po filto-khishobashin omovom proizvodstva stali
Primeneniya vakuma v metallurgii (Use of Vacuum in Metallurgy) Moscow, Izd-vo
 AN SSSR, 1960. 314 p. Karta alip inserted. 4,500 copies printed.

Sponsoring Agency: Abdumalyk msk SSSR. Institut metallurgii Izmni A.A. Baykov.
Emulsiya po filto-khishobashin omovom proizvodstva stali.

Repr. Ed.: A.M. Smirnov, Corresponding Member, Academy of Sciences USSR; Ed. of
 Publishing House: G.K. Makovskiy; Tech. Ed.: S.G. Markovich.

PREFACE: This collection of articles is intended for technical personnel interest-
 ed in recent studies and developments of vacuum steelmaking practice and equip-
 ment.

CONTENTS: The book contains information on steel making in vacuum induction fur-
 naces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of
 steel and alloys. The functioning of apparatus and equipment, especially
 vacuum furnaces and vacuum booster pumps is also analyzed. Personalities are
 mentioned in connection with some of the articles and will appear in the Table
 of Contents. The articles have been translated from English. Some of the

Chapters: K.K. Makovskiy and I.S. Bolgov, Melting and Pouring of
High-Aluminum Steel in Vacuum [V.A. Gerasimov, B.F. Lashko, V.A. Ashabab,
 A.P. Balashov and V.Y. Pashin participated in the work] 23

Belinskii, Ya.I., and N.T. Rodionov, Casting of Oxide-Film-Forming Alloys
in the Protective Atmosphere Under Vacuum
Makovskiy, Ya.I., L.K. Bulakov, B.I. Porok and Yu.A. Pilia. The Effect of
 Melting and Casting in Vacuum and in Protective Atmosphere on the Properties
 of Titanium Castings 30

Klimovskiy, B.Y., and A.M. Smirnov, Vacuum Melting of Stainless Steel
Stal 45

Pilipchuk, M.M. The Effect of Vacuum Melting on the Quality of Industrial
Steel 40

PART II. MELTING OF STEEL AND ALLOYS IN VACUUM ARC FURNACES

Stoyan, A.S., G.A. Sushchinskii, A.M. Jazayev and B.Y. Fedin, Melting of Re-
fractory Metals in Vacuum Arc Furnaces 65

Balakov, G.E., D.S. Larionova, A.I. Jazayev and A.S. Stoyan, Investigation of
the Properties of Self-Heating Steel Heated in a Vacuum Arc Furnace
Stoyan, A.S., Vacuum Arc Melting 72

Polin, L.Y., and E.I. Serebryakova, Melting of Stainless Steel in Vacuum
Arc Furnaces 76

Alexeev, M. Properties of Alloys Melting in Vacuum 79

Serebryakova, E.I., Production of Low-Carbon Ferrochromes by Blowing Under
Vacuum 88

PART III. REDUCTION PROCESSES IN VACUUM

Gol'd, P.Y., and G.P. Shcheglov, Kinetics of the Reduction of Niobium
Pentoxide by Carbon in Vacuum 101

Myerson, G.L., Vacuum-Thermal Reduction of Oxides of the Refractory Metals
by Carbon (Oxide, Iron, Vanadium, Zirconium, Tantalum, Niobium, Zirconium, and
lastly tungsten metal) at high vacuums, G.L. Myerson and
and Gold conducted investigations on which this article is based]
Gold, G. (Polish People's Republic, Institute of Iron Metallurgy in
Warsaw) Description of Processes in Vacuum 115

124

S/137/62/000/012/042/085
A006/A101

AUTHORS: Larionova, D. S., Laposhko, L. D.

TITLE: The effect of alloying with tungsten and other components upon the quality of bearing steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 68, abstract 12I404 ("Tr. Vses. n.-i. konstrukt.-tekhmol. in-ta podshipnik. prom-sti", 1961, no. 2, (26) 95 - 107)

TEXT: Additional alloying with small W amounts of X15 (ShKh15) steel of a standard composition was carried out for the purpose of obtaining steel with higher contact strength. The properties of steel alloyed with W were studied on a number of heats; as a result it was found that the macrostructure in ShKh15 steel with W was denser than in standard ShKh15 steel. The upper limit of quenching temperatures for ShKh15 steel with 0.15-1.13% W and ShKh15 steel is equal. For steel with 0.62% W and 0.72% Ni the upper and lower limits of quenching temperatures are shifted toward lower temperatures by about 20°C . During heating to 300°C , tempering stability of ShKh15 steel with W and ShKh15 steel is equal, Card 1/2

The effect of alloying with...

S/137/62/000/012/042/085
A006/A101

and somewhat higher in ShKh15 steel with W and Ni. After quenching the amount of residual austenite in the structure of ShKh15 steel with W is lesser than in conventional steel. In ShKh15 steel with W and Ni the amount of residual austenite is higher than in ShKh15 steel. At 860 and 930°C the size of austenite grains is equal in ShKh15 steel with W and ShKh15 steel; it is less in ShKh15 steel with W and Ni. The roasting ability of ShKh15 steel with 0.36 to 1.13% W is higher than that of ShKh15 steel. The a_k of ShKh15 steel with W, and also with W and Ni, is higher than that of ShKh15 steel during quenching from 900°C and, particularly, after tempering at 200°C and more. Contact endurance of ShKh15 steel with 1.13% W is higher than that of conventional steel.

L. Koblikova

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/012/004/085
A006/A101

AUTHORS: Larionova, D. S., Fedoseyeva, R. K.

TITLE: Non-metallic inclusions in vacuum-remelted bearing steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 44 - 45,
abstract 12V282 ("Tr. N.-1. 1 eksperiment. in-ta podshipnik.
prom-sti", 1960, 1 (21), 55 - 68)

TEXT: The authors investigated the quality of X15 (ShKh15) grade steel, grade X906 (EI906), X907 (EI907), X908 (EI908) stainless and grade X347 (EI347) and X944 (EI944) scale-resistant steels, produced by vacuum arc-remelting. It was established that vacuum ball-bearing steel X15 (ShKh15) is of higher purity in respect to non-metallic impurities than steel melted by conventional methods. In vacuum arc-remelting of ShKh15 steel, the amount of oxide and silicate inclusions is, in particular, considerably reduced. Sulfide and globular inclusions in this steel decrease to a lesser degree. In vacuum arc remelting of stainless and scale-resistant steels their refining from Al-inclusions proceeds more effectively than for ShKh15 steel. Vacuum arc remelting does not

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Non-metallic inclusions in...

S/137/62/000/012/004/085
A006/A101

reduce the amount of nitridic inclusions in the steel. There are 13 references.

A. Savel'yeva

[Abstracter's note: Complete translation]

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2000

CIA-RDP86-00513R000928710009-5

S/137/62/000/012/004/085
A006/A101

AUTHORS: Larionova, D. S., Vlasova, R. A., Fedoseyeva, R. K.

TITLE:

Some technical properties of vacuum bearing steel

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 68 - 69, abstract 121406 ("Tr. N.-1. eksperim. in-ta podshipnik. prom-sti", 1960, v. 1 (2) 69 - 79)

TEXT:

The authors investigated the effect of vacuum-arc remelting of (ShKh15) steel upon its roasting and quenching ability, proneness to austenitic grain growth, the amount of residual austenite after quenching, cutting machinability, and corrosion resistance. It was established that the roasting ability of the steel after vacuum remelting depends directly upon the roasting ability of the base metal. The roasting ability of vacuum steel as compared with that of the base metal is somewhat lower at a considerably lesser reduction of vacuum-steel blanks. At an equal degree of reduction of the blanks, the roasting ability of vacuum steel exceeds that of the initial metal. The amount of residual austenite in vacuum steel at equal quenching temperatures is somewhat below that of

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S/276/63/000/001/024/028
A006/A101

AUTHORS: Larionova, D. S., Laposhko, L. D.

TITLE: The effect of alloying with tungsten and other elements upon the quality of bearing steel

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no. 1, 1963, 9, abstract 1057 ("Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti", 1961, no. 2 (26) 95 - 107)

TEXT: The macrostructure of grade ШХ15 (ShKh15) steel alloyed with tungsten, is more dense than that of standard ShKh15 steel. The upper limit of quenching temperatures for steel alloyed with tungsten (0.15 - 1.13%) and conventional steel ShKh15 are equal (determination from the structure). For steel alloyed with tungsten (0.62%) and nickel (0.72%) the upper and lower limits of quenching temperatures are shifted toward lower temperatures by about 20°C . In heating up to 300°C the stability against tempering of ShKh15 steel, alloyed with tungsten, and standard ShKh15 steel, is practically equal. Steel ShKh15 with tungsten and nickel shows a somewhat greater stability against tempering. After

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APPROVED FOR RELEASE: 06/20/2000

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A006/A101

The effect of alloying with...

quenching the structure of ShKh15 steel with tungsten shows a lower content of residual austenite than that in conventional steel. With higher quenching temperature this difference increases with a higher tungsten content. In steel ShKh15 with tungsten and nickel, there is more residual austenite than in steel of this grade with a standard composition. In the investigated temperature ranges of quenching and tempering, changes in the dimensions of specimens of standard composition ShKh15 steel and steel alloyed with tungsten are practically equal. Additional alloying with nickel of ShKh15 steel with tungsten entails reduced changes in the dimensions during quenching and considerably greater changes in tempering as compared to ShKh15 steel of standard composition. At 860°C and 930°C the size of austenite grains of ShKh15 steel with tungsten and this steel grade of a standard composition are practically equal. The size of grains in ShKh15 steel with tungsten and nickel is smaller. Quenching ability of steel ShKh15 with tungsten from 0.36 to 1.13%, is higher than in the investigated standard composition steel. Highest quenching ability is obtained in steel with 0.82% tungsten. The quenching ability of this steel determined from the distance between the butt and the zone with hardness $HRC \leq 61$, is twice as high as that of ShKh15 steel of standard composition, and only slightly below the quench-

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The effect of alloying with...

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A006/A101

ing ability of MnX15FC (ShKh15GS) steel (heat no. 6). The quenching ability of steel ShKh15 with 0.62% tungsten and 0.72% nickel is considerably higher than that of ShKh15GS steel. The toughness of ShKh15 steel with tungsten and also with tungsten and nickel, in quenching from 900°C and in particular, after tempering at 200°C, is higher than that of standard ShKh15 steel. Contact endurance of ShKh15 steel with 1.13% tungsten is higher than that of conventional steel. It should be noted that the tests were negatively affected by the contamination of metal with non-metallic impurities. A greater effect of alloying ShKh15 steel with tungsten can be expected when melting methods are used which assure the production of purer metal, as e.g. remelting of steel in a vacuum or under slag.

[Abstracter's note: Complete translation]

Card 3/3

S/277/63/000/001/006/017
A052/A126

AUTHORS: Larionova, D. S., Vlasova, R. A., Fedoseyeva, R. K.

TITLE: Some technological properties of vacuum bearing steel

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk, 48. Mashinostroitel'nyye materialy, konstruktssii i raschet detaley mashin, no. 1, 1963, 6, abstract 1.48.43 ("Tr. N.-1. i eksperim. in-ta podshipnik. prom-sti", v. 1(21), 1960, 69 - 79)

TEXT: The effect of the vacuum arc remelting of MnX15 (ShKh15) steel on its technological properties: annealability, hardenability, tendency to austenitic grain growth, the amount of residual austenite after hardening, and machinability was investigated. Further, the corrosion resistance of vacuum steel was investigated. The annealability of steel after vacuum remelting depends directly on the annealability of the initial metal. The degree of annealability of ShKh15 vacuum steel compared with the initial metal, at a considerably lower reduction of vacuum steel blanks, is a little lower than that of the initial steel. The amount of residual austenite in vacuum steel at equal hardening tem-

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Some technological properties of vacuum bearing steel

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A052/A126

peratures is a little lower than in the initial metal. In respect of machinability the vacuum remolten steel does not differ essentially from the steel molten by means of a conventional technology. When producing bearing elements from vacuum steel, a 13 - 14 class working surface finish can be achieved which is difficult to achieve when producing elements from conventionally molten steels. The corrosion-resistance of ShKh15 vacuum remolten steel is higher than that of a common steel.

[Abstracter's note: Complete translation]

Card 2/2

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J1-Ag '60. (MIRA 13:7)
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Characteristics of the vaccine culture of *Brucella abortus*
19-BA grown under conditions of aeration. Veterinariia 41
no.2:27-30 F '64. (MIRA 17:12)

1. Institut eksperimental'noy meditsiny imeni N.F. Gamalei AN SSSR.

BASKAKOV, L.S.; KHAZAN, Ye.A.; AKINDINOV, V.I.; LARIONOVA, G.I.;
PANKRASHKIN, N.I.; KUT'IN, V.A.

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LARIONOVA, G.I., Cand Med Sci -- (diss) "Innervation of the
muscles of the pelvic diaphragm." Smolensk, 1959, 19 pp
(Smolensk State Med Inst) 200 copies (KL, 33-59, 121)

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LARIONOVA, G.I.

Experimental reactive changes in the nervous elements of the
large intestine. Trudy SVI 15:164-171 '62 (MIRA 1967)

1. Iz kafedry normal'nykh smertel'nykh (zav. - prof. G.I. Shapovalov)
Smolenskogo gosudarstvennogo meditsinskogo instituta.

LARIKOVA, G. V. and DUDYAK, Y e. P.

"On the Question of the Laboratory Diagnosis of Toxoplasmosis"

Voprosy toksoplazmoza, report themes of a conference on toxoplasmosis,
Moscow, 3-5 April 1961, publ. by Inst Epidemiology and Microbiology
im. N. F. Gamaleya, Acad. Med. Sci USSR, Moscow, 1961, 69pp.

BORSUK, V.N.; LARIONOVA, I.L.; MORYREVA, A.N.

Metabolism of salts and water in cows. Report no.2: Elimination of chlorine and potassium by kidneys in cows. Trudy Inst.fiziol. 4: 210-212 '55. (MLRA 9:4)

1.Laboratoriya fiziologii sel'skokhozyaystvennykh zhivotnykh. Zavednyushchiy I.A.Baryshnikov.
(Minerals in the body) (Cows) (Urine--Secretion)

LUBENETS, G.S.; LARIONOVA, I.P.

Using solid domestic wastes as biological fuel. Nauch. trudy
AKKH no.24:63-68 '64 (MIRA 18:2)

KONOVANOV, E.Ye.; PEYZULAYEV, Sh.I.; PINCHUK, G.P.; LARIONOVA, I.Ye.;
KONDRAT'YEVA, L.I.

Use of zonal fusion for concentrating impurities in spectral
analysis of pure bismuth. Zhur. anal. khim. 18 no.5:624.
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LARIONOVA, K.

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(No subject headings)

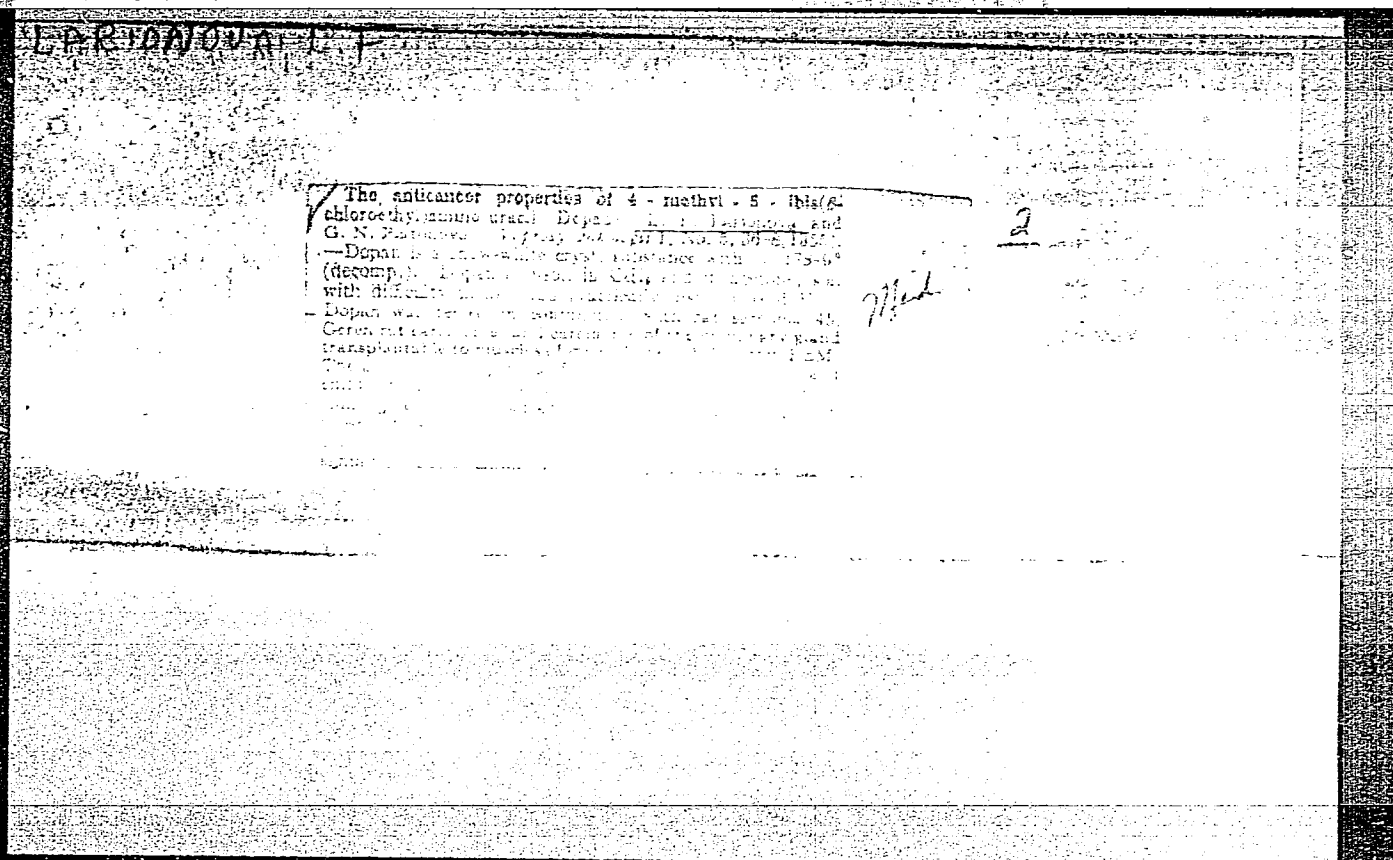
LARIONOVA, K.M.

Changes in the histaminepexic ability of blood in irradiated dogs.
Radiobiologiia 1 no.2:247-249 '61. (MIRA 14:7)
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(BLOOD--ANALYSIS AND CHEMISTRY)

LARIONOVA, L.

Thermal disinfection of barley. Zashch. rast. ot vred. i bol.
10 no.12:23-24 '65. (MIRA 19:1)

1. Zaveduyushchaya laboratoriyey zashchity rasteniy, Falenskaya
selektсионnaya stantsiya.



LARIONOVA, L.I.

Content of halogens in the air on the shore of Bol'shoye Otal-Moynakskoye Lake. Gidrokhim. mat. 35:17-24 '63. (MIRA 16:7)

1. Kontrol'no-nablyudatel'naya stantsiya Yevpatoriyskogo territorial'nogo kurortnogo upravleniya professional'nykh soyuzov, Yevpatoriya.
(Yevpatoriya region--Air--Analysis) (Halogens)

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SOV/184-59-4-7/18

3. 1190
21(0) 5. 1210

AUTHORS: Razumov, I.M., Candidate of Technical Sciences; and Larionova, L.I., Engineer

TITLE: On the Calculation of the Carrying Away of Fine-Grained Material From Reactor Installations With Pseudoliquefied Catalyzer Layers

PERIODICAL: Khimicheskoye mashinostroyeniye, 1959, Nr 4, pp 19 - 21 (USSR)

ABSTRACT: The article describes the tests carried out in "Giproneftemash" plant on the carrying away of catalyzer from a four-plate multistage counterflow apparatus 200 mm in diameter with a pseudoliquefied layer. To collect the material carried away, three cyclones were connected successively, 600 mm above the pseudoliquefied layer of the fourth plate. The pseudoliquefied layer was formed on gas-distributing grates (sieves) with holes of 3 mm (4.84%), 5 mm (4.7%) and 5 mm (6.78%), the bracketed figures meaning the relation of the total hole-area to the surface of the apparatus. Air at temperature of 20°C was used as a pseudoliquefying agent. Circulation of solid fine-grained material in the apparatus was performed with a pneumatic lifter. The average circulation of catalyzer was 284 kg/h. Catalyzer carried out of the layer by air stream was taken from the cyclones and after having been weighed was returned into the apparatus.

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On the Calculation of the Carrying Away of Fine-Grained Material From Reactor Installations With Pseudoliquefied Catalyzer Layers

During the tests, samples of pseudoliquefied layer and catalyzer, collected by the cyclones, were taken to determine their fractional composition. Sizes of solid particles, making up the fractions, were counted as diameters of equivalent spheres. The average composition of catalyzers was as follows: microspherical natural clay catalyzer 0.49 mm (2.82%), 0.34 mm (21.40%), 0.234 mm (48.51%), 0.093 mm (21.10%) under 0.093 mm (6.17%); microspherical synthetic catalyzer 0.41 mm (24.30%), 0.34 mm (27.50%), 0.27 mm (22.10%), 0.115 mm (22.10%), 0.062 mm (4.00%); ground aluminosilicate catalyzer 0.7 mm (6.55%), 0.56 mm (5.77%), 0.45 mm (17.93%), 0.3 mm (29.00%), 0.2 mm (26.20%), 0.0615 mm (21.10%) under 0.0615 mm (3.45%). Experimental data were used to compute the Lyashchenko and Reynolds numbers on the basis of the speed in the free cross-section of the apparatus, and of the weight of spherical particles, equivalent to the largest particles carried away. The air stream speeds in the free cross-section were within 0.3 - 0.6 m/sec.; maximum diameter of particles carried away was 0.03 - 0.2 mm. Diagram 1 represents the relations between Lyashchenko and Reynolds parameters and it shows that the experimental points, independent of both, catalyzer type and gas-distributing grate, are grouping near the

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On the Calculation of the Carrying Away of Fine-Grained Material From Reactor Installations With Pseudoliquefied Catalyzer Layers

theoretical relation. Equations (2) and (3) permit to calculate the maximum diameters of particles, which will be carried away from the apparatus by a gas stream, passing through the pseudoliquefied layer. On diagram 2 the diameter of carried away particles is plotted against gas stream speed. The maximum deviation of the calculated values from the experimental values was for microspherical natural clay catalyzer 13.3%, for microspherical synthetic catalyzer 28% and for ground aluminosilicate catalyzer 33%. The equations derived by the authors are compared with those proposed by L.A. Akopyan and A.G. Kasatkin [Ref 3] and by V.D. Goroshko, R.B. Rozenbaum and O.M. Todes [Ref 4]. Equations (7) - (11) give the same dependence between the maximum diameter of carried away particle on the one hand and the physical parameter of the stream and the specific weight of material on the other hand. Equations (12) - (14) serve to answer the question on the validity of experimental data obtained at low temperatures for industrial type installations with higher temperatures. Calculations carried out for air, ethane, propane and nitric oxide show that a slight change (within 20 - 30%) of the lifting power of gas stream, caused by the change of

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On the Calculation of the Carrying Away of Fine-Grained Material From Reactor Installations With Pseudoliquefied Catalyzer Layers

its temperature; cannot essentially influence either the fractional composition of fine-grained material carried away, or its weight. In conclusion it is stated that the carrying away of fine-grained material depends only on the speed of the gas stream in the apparatus and the diameter of the particles. Experimental results obtained at low temperatures can be supplied to industrial installations working at high temperatures. There are: 2 sets of graphs, 1 table and 4 Soviet references.



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RAZUMOV, I.M., kand.tekhn.nauk; LARIONOVA, L.I., inzh.

Calculation of the amount of fine-grain material carried away
by a gas stream from a fluidized bed. Khim. mash. no. 1:13-14
Ja-F '61.

(MIRA 14:1)

(Fluidization)